

A NEW SPECIES OF *BIOSTERES* FOERSTER FROM INDIA
(INSECTA: HYMENOPTERA: BRACONIDAE)¹

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(With three text-figures)

INTRODUCTION

The genus *Biosteres* Foerster belongs to the subtribe Biosterina of the tribe Opiini of the subfamily Opiinae. Foerster (1862) erected *Biosteres* with *Bracon carbonarius* Nees, which was originally designated as the type species.

Fischer (1965) revised the genus *Biosteres* totally and later Fischer (1967, 1971, 1973) also attempted taxonomy of the genus. Fischer (1978) divided *Biosteres* into two subgenera viz., *Chilotruchia* Foerster and *Biosteres* Foerster s. str. and also provided a key to Indo-Australian species of *Biosteres* Foerster s. str.

Only three species of the subgenus *Biosteres* Foerster s. str. viz., *Biosteres* (*Biosteres*) *testaceipes* Cameron (1911), *Biosteres* (*Biosteres*) *kashmirensis* Fischer (1966) and *Biosteres* (*Biosteres*) *towensi* Papp (1983) have been recorded so far from India.

In this work, a new species belonging to the subgenus *Biosteres* viz., *Biosteres* (*Biosteres*) *sahyadrensis* is described on the basis of material collected in India, Maharashtra, Aurangabad. Thus there are five taxa under *Biosteres* (*Biosteres*) from the Indo-Australian region of which four are from India.

A key to the Indo-Australian species of *Biosteres* (*Biosteres*) by Fischer (1978) which was in German has been translated in to English and the new species, *Biosteres* (*Biosteres*)

sahyadrensis is also included.

Types of this species are in the collection of the second author and will be deposited in the National Collection of the Zoological Survey of India, Calcutta, India.

A key to the species of subgenus *Biosteres*
Foerster s. str. by Fischer (1978)

1. Mesonotum complete, moderately, uniformly punctate; antennal segment 4 longer than 3; 4.4 mm, India, H.P.; Simla..... *testaceipes* Cameron (1911)
— Mesonotum smooth and bare, almost stout, notauli with small punctures throughout; antennal segment 4 almost as long as 3 2
2. Almost complete abdomen and all legs reddish-brown; head and thorax black; 4.1 mm, India. J.K., Kashmir... *kashmirensis* Fischer (1966)
— Head and thorax not black; whole body yellowish-red 3
3. Body yellowish-red; ovipositor sheath black; 4th, 5th and 6th tergites reddish-brown on middorsal side; 5.00 mm, India, Maharashtra, Aurangabad *sahyadrensis* sp. nov.
— Head, thorax and abdomen reddish-brown 4
4. Almost complete abdomen and all legs completely black; head and thorax red; 4.1 mm, Australia, Victoria.....
..... *tenebrigaster* Fischer (1978)
— Head and abdomen dark brown; all legs brownish-yellow; thorax brownish-yellow; 3.2 mm, India, West Bengal.....
..... *towensi* Papp (1983).

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Biosteres (*Biosteres*) *sahyadrensis*, sp. nov.
(Figs. 1-3)

Female: 5.00 mm (Fig. 1). Head (Fig. 2)
0.3 times as long as wide, head in dorsal view,

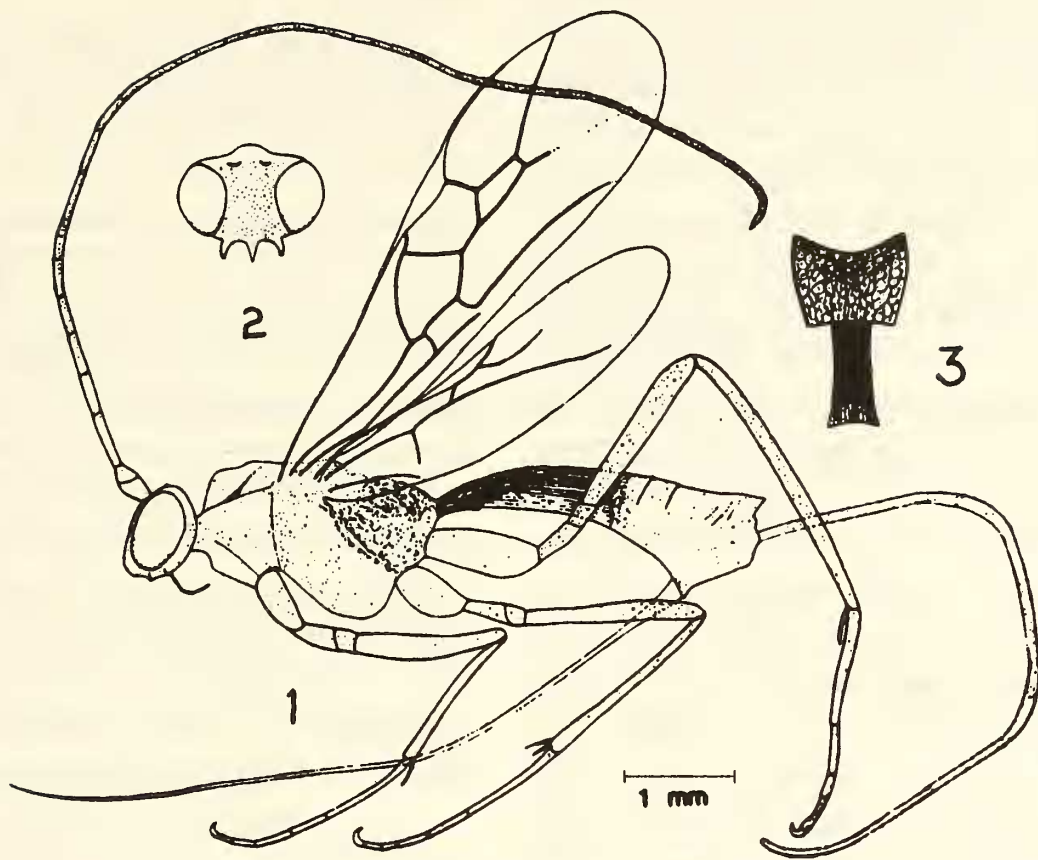


Fig. 1-3: *Biosteres (Biosteres) sahyadrensis*, sp. nov. (Female). 1. Adult, lateral view; 2. Head, frontal view; 3. Propodeum with first abdominal tergite.

behind eyes not broadening; vertex shiny, smooth; ocelli in triangle on black oblong spot; interorbital distance 5x ocello-ocular distance; interocellar distance as long as ocello-ocular distance; frons smooth, shiny, slightly concave; antenna long, 2 + 46 segmented; scape 2x as long as wide, smooth, very weakly punctate, pubescent; pedicel 1.2x as long as wide, smooth, pubescent; 1st flagellar segment 6.3x as long as wide, moderately punctate, pubescent; flagellum with fine bristles throughout the length; penultimate segment 1.5x as long as wide; terminal segment 5x as long as wide; face 0.7 times as long as wide, smooth, weakly punctate, pubescent; clypeus as long as wide, with a long tooth-like outgrowth at anterior side, convex, smooth, weakly punctate, pubescent; malar space 0.5 times the basal width of mandible, smooth;

mandible 2.5x as long as wide, bare; occipital carina absent; temple smooth, shiny, weakly punctate, in lateral view 1.25x as long as eye.

THORAX: 2.3x as long as wide; pronotum shiny, moderately, shallowly punctate, pubescent; mesoscutum smooth, shiny, convex, very weakly, shallowly punctate, pubescent; median lobe without any groove or carina; notauli distinct, transversely crenulated; disc of scutellum convex, closely punctate, pubescent, apex smooth; propleurum smooth, weakly punctate, pubescent; mesopleurum smooth, moderately, closely punctate, pubescent; mesopleural suture distinct; sternaulus not distinct; metapleurum rugosely, moderately punctate, pubescent; post-scutellum depressed; propodeum (Fig. 3) rugoso-reticulate, very weakly, shallowly punctate at the basal area, pubescent; propodeal spiracle round. Hindleg

coxa 2.5x as long as wide, smooth, moderately, weakly punctate, pubescent; trochanter 0.7 times as long as coxa, moderately punctate, pubescent; femur 8.5x as long as wide, moderately punctate, pubescent; tibia 1.6x as long as femur; tibial spur 0.4 times as long as basitarsus; claw bifid. Forewing 3.5x as long as broad; stigma 5x as long as wide; radius ending before tip of wing; first abscissa of radius 1.4x as long as width of stigma; second abscissa of radius 1.8x as long as first abscissa; third abscissa of radius 4.5x as long as first abscissa; first intercubitus 22.2x as long as second intercubitus; metacarpus 1.4 x as long as stigma; cubitus not sclerotized throughout; basal 0.55 times as long as medius, costa 1.55x as long as medius; nervulus slightly inclivous, as long as width of stigma; subdiscoidius as long as submedius; margin with fine bristles; hind wing 4.6x as long as broad; subcostella 1.85x as long as mediella; mediella 6.3x as long as basella; nervellus inclivous, 0.4 times as long as submediella; margin with fine bristles.

ABDOMEN: 5x as long as wide; first tergite 1.9x as long as apical width, strigose, pubescent; second tergite 1.2x as long as wide, striate, pubescent; third tergite as long as wide, basal half striate, apical half smooth, weakly punctate, pubescent; remaining tergites smooth, shiny, weakly punctate, pubescent; ovipositor 1.2x as long as ovipositor sheath, the latter with stiff bristles throughout the length.

Yellowish-red. One oblong spot on vertex, veins, stigma, ovipositor sheath black; 4th, 5th and 6th tergites reddish-brown on middorsal side.

MALE: Unknown.

Holotype: Female: INDIA: Maharashtra: Aurangabad, 25.xi.1987, on wing, coll. P.K. Nikam; Antenna, wings and legs mounted on slides and labelled as above.

Paratypes: 12 females, data same as holotype.

Comments: According to the key to the Indo-Australian species of the subgenus *Biosteres* Foerster s. str. by Fischer (1978) *Biosteres (Biosteres) sahyadrensis*, sp. nov. approaches *Biosteres (Biosteres) kashmirensis* Fischer (1966) in the following characters: (1) propodeum rugoso-reticulate, (ii) sternaulus not distinct and (iii) mesonotum smooth, bare. However, the new taxa differs from the same in having the following peculiarities: (i) sternaulus not distinct and (iii) mesonotum smooth, bare. However, the new taxon differs from the same in the following peculiarities: (i) head in dorsal view behind eyes not broadening, (ii) temple in lateral view 1.25x as long as eye, (iii) antenna 2 + 46 segmented, (iv) radius ending before tip of wing and (v) head, thorax and abdomen yellowish-red.

In addition *Biosteres (Biosteres) sahyadrensis*, sp. nov. shows superficial resemblance with *Biosteres (Biosteres) townesi* Papp (1983), but differs from the same in having the following additional characters (i) propodeum rugoso-reticulate, (ii) body 5 mm in length, (iii) notauli distinct, (iv) first abscissa of radius 1.4 X as long as width of stigma and (v) nervulus slightly inclivous.

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* Original not referred.